



Name: _____
Ms. Estrada, Mr. Bielmeier, Mr. Tiénou-Gustafson
Geometry, Period _____
Due Date: Wed, 10 Sep 2014

HW11_Parallel&Perpendicular

**Geometry
Homework**

Form A

PARALLEL PRACTICE

1) What is the slope of a line parallel to $x - 5y = -20$

2) Write an equation for a line parallel to $6x - 5y = 15$ and travels through the point (5, -2)

$$\begin{array}{r} -5y = -6x + 15 \\ \hline -5 \quad -5 \\ \hline y = \frac{6}{5}x - 3 \end{array}$$

3) Determine whether the two lines are parallel

$$\begin{array}{l} \left\{ \begin{array}{l} y = 3x + 4 \\ 12x = 4y - 24 \end{array} \right. \\ \downarrow \\ \frac{12x + 24 = 4y}{4} \\ \downarrow \\ y = 3x + 6 \end{array}$$

4) Find the value of k so that the lines through the given points are parallel.

a) Line 1: (-4, -2) and (0, 0)
Line 2: (2, 7) and (k, 5)

a) Line 1: (-1, 9) and (-6, -6)
Line 2: (7, k) and (0, -2)

5) **Challenge:** Find the slope and y-intercept of the graph of the equation $Ax + By = C$ where $B \neq 0$. Use your results to find the slope and y-intercept of the graph of $3x + 2y = 18$.

PERPENDICULAR PRACTICE

1) Write the negative reciprocal for each of the following

- a. $-\frac{4}{1}$ *flip numbers* $\frac{1}{4}$
change sign
- b. $\frac{7}{1}$ _____
- c. $\frac{3}{4}$ _____
- d. $-\frac{5}{3}$ _____

2) Write an equation of a line perpendicular to

$$32 = -4x + 8y$$

$$8y = 4x + 32$$

$$y = \frac{1}{2}x + 4$$

3) Write an equation in slope – intercept form of a line passing through the point

$(-2, -4)$ and **perpendicular** to $y = -\frac{2}{7}x + 2$.

4) Determine which of the following equations are parallel or perpendicular to one another. Clearly label your answers and provide solid reasoning for your choice.

- Line A: $3y - 2x = 12$
 Line B: $y = -6x + 44$
 Line C: $3y = 2x - 13$
 Line D: $2y = -3x + 37$

5) Write an equation in slope-intercept form that passes through point $(-8, 2)$ and is perpendicular to the slop of $-1/5$

6) Write an equation in slope – intercept form of the line that passes through $(-1, 2)$ and is **perpendicular** to the line $y = -3x + 4$?